

REMARKS

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

Claims 1-18 are active in this application.

In **Claims 1 and 4**, the alcohol-based solvent, the vapor of which is introduced into the recovery column, is deoxidized in advance of being introduced into said recovery column and an oxygen concentration in the alcohol-based solvent is not more than 60 ppm.

For a clearer understanding of the differences between the present invention and Blumberg et al (US 3,513,142), Applicants wish to draw the Examiner's attention to the scheme on page 1 of Blumberg et al (a copy of which is attached) and to the scheme representing the process according to the present invention (also attached hereto).

With reference to the scheme depicting the process of the present invention, the solvent is deoxidized at **Point C** to obtain an oxygen concentration of not more than 60 ppm.

Blumberg et al disclose that methanol vapor (indicated with an arrow from the **lower-right of the stripping column** in the scheme of the process of Blumberg et al) is used for recovering vinyl acetate (Blumberg et al, col. 3, line 61 to col. 4, line 2; col. 6, lines 8-13; and Examples, particularly for example, col. 10, line 75). However, Blumberg et al fail to disclose or suggest the concentration of oxygen contained in the methanol vapor that is introduced into the stripping column. In other words, while the present invention deoxidizes at **Point C** to obtain a defined oxygen concentration of the methanol vapor, Blumberg et al fail to disclose the oxygen concentration at that point of the process.

The Examiner asserts that Blumberg et al disclose deoxidation of methanol. However, Blumberg et al refer to the oxygen concentration in methanol at a much earlier point in the process, corresponding to **Point A** in the attached sheet. Blumberg et al do not disclose the oxygen concentration at Point C in the scheme.

In addition, the Examiner acknowledges that methanol is deoxidized before polymerization in Examples 1 and 2 of the present invention. However, the same treatment is carried out in Comparative Example 1 as well. **Examples 1 and 2 are distinguished from Comparative Example 1 in that the methanol vapor (used at Point C in the scheme) used for recovering vinyl acetate is deoxidized.** The inventors of the present invention have found that the oxygen contained in the alcohol-based solvent used **when recovering vinyl acetate** contributes to the **visible imperfections such as discoloration, fish eyes, rough surfaces** (specification, page 1, lines 9-15 and 30-32). Blumberg et al fail to disclose an oxygen content in methanol used in the recovery process and the influence of the oxygen contents on the color of the EVOH product. All they state is that the amount of coloration found in the polyvinyl alcohol will depend in large part upon the extend to which the dissolved oxygen is **removed from the feeds to the polymerizer (Point A in the scheme)** (Blumberg et al, col. 4, lines 43-46).

A comparison between **Examples 1 and 2 and Comparative Example 1** of the specification shows that when the **solvent used during the recovery is deoxidized** (Examples 1 and 2 with oxygen concentration of 10 and 20 ppm), a white product with a **low yellow index of 9 and 13** was obtained. On the other hand, in **Comparative Example 1**, the **methanol fed to the recovery column was not deoxidized** (oxygen concentration of 80 ppm) and a

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yellowish product with a yellow index of 20 was obtained. Thus, **the use of the deoxidized solvent in the recovery process results in a superior product.** This is not disclosed or suggested by the reference.

Therefore, the rejection of Claims 1-15 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Blumberg et al (US 3,513,142) and the rejection of Claims 16-18 under 35 U.S.C. §103(a) as being unpatentable over Blumberg et al (US 3,513,142) are believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of these rejections is respectfully requested.

The rejection of Claims 1-18 under 35 U.S.C. §112, 2nd paragraph, is respectfully traversed.

Claims 1 and 4 require that “said alcohol-based solvent, the vapor of which is introduced into said recovery column, is deoxidized **in advance of being introduced into said recovery column.**” This is further illustrated by the attached scheme of the continuous vinyl acetate polymerization. According to the present invention, oxygen is removed at point C in the scheme, namely **in advance of being introduced into said recovery column, as currently claimed.** Accordingly, the claim language is not indefinite and this rejection should be withdrawn.

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This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

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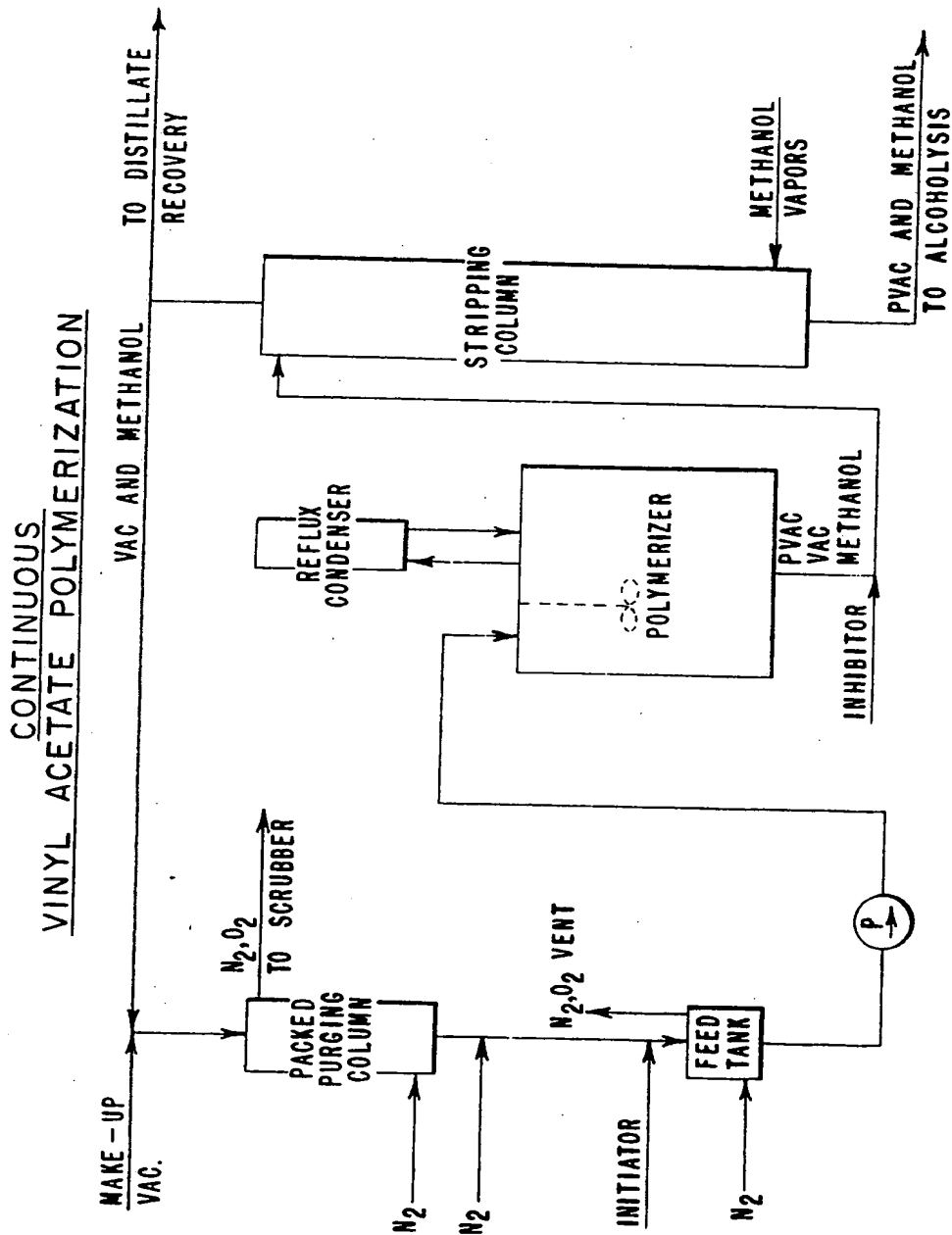


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J. A. BLUMBERG ET AL
PRODUCTION OF POLYVINYL ALCOHOL OF
IMPROVED COLOR BY OXYGEN PURGE
Filed March 7, 1969

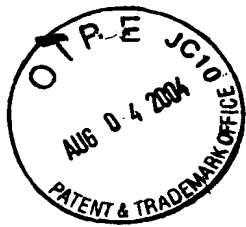
3,513,142



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According to Present Invention

CONTINUOUS VINYL ACETATE POLYMERIZATION

